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CATALOGUE

OF THE

Products of the Brazilian Forests.

AT THE

INTERNATIONAL EXHIBITION

IN

PHILADELPHIA,

BY

JOSÉ DE SALDANHA DA GAMA, D. PH.

MEMBER OF THE BRAZILIAN COMMISSION AND PROFESSOR OF BOTANY IN THE POLYTECHNICAL SCHOOL OF RIO DE JANEIRO, ETC., ETC.

NEW YORK:

"O Novo Mundo" Printing Office, 39 Park Row.

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PRODUCTS OF THE BRAZILIAN FORESTS.

THE most notable portion of the Exposition from Brazil, in Philadelphia, is that which is placed in the Agricultural Hall, comprehending the many varieties of her agricultural industry and the beautiful specimens of the different woods from her immense forests. To describe them all, one by one, would be a task requiring great exertion and much space; the coffee and the cotton alone would be quite sufficient for subjects of an extensive memorial, if we had to describe them and demonstrate the importance of their cultivation in the vast territory of the Empire of Brazil.

It is our intention only to condense into a brief catalogue the principal types of her *flora* that are represented at the great Exposition in Fairmount Park, and to show, in simple language, some of its applications.

It is proper to enumerate in this report, the plants called *secular*, which are worthy of the greatest attention for all purposes of civil engineering, and which are not excelled by any others from any part of the globe.

The specimens figuring in the Brazilian section, belong to different expositors, and to several provinces of the Empire, as follow:

A collection from the province of Alagoas, exhibited by Mr. Cavalcante.

Another from the province of Paraná, by Dr. Hermelino de Leão.

One from the province of Maranhão, by the respective provincial Commission.

One from the province of Rio de Janeiro, by the Baron de Villa de Franca.

One from the municipality of Campos, by José Joaquim de Araújo e Silva.

One from the province of São Paulo, by different exhibitors.

One from Bahia, Dr. Borja Castro being the principal exhibitor, and finally, some *woods* from Pará and Amazonas, taken from highly esteemed species, used there for building purposes.

For the assistance of strangers in examining the immense resources of our sylvan products, they will find in the following table a list, according to the botanical names of those which most recommend themselves for all the purposes of industry:

ORDER OF ANONACEAE.

Guatteria alba. All.—For interior work.
Anona palustris.

ORDER OF GUTTIFEROUS.

Calophyllum brasiliense.—A tree yielding resin.
Symphonia globulífera.—Yields the pitch called *Ounany.*
Platonia insignis.—A fruit tree of the northern province.

ORDER OF HYPERICINEAE.

Vismia guyanansis. Aubl.—A tree yielding wax, or red gum.

ORDER OF LEGUMINOUS.

Dipteria adorata. D. C.—Produces the Tonka bean.
Dalbergia nigra. All.—Used for making rich and elegant furniture and cabinet making. It is already known in the United States and Europe as one of the *palisendres.*
Machærium allemani. Bt.—For railroad sleepers and other works, especially those used under water.
Machærium firmum. Bt.—Another *palisendre* used for cabinet making.
Machærium violaceum. Bt.—Used for same purposes as the preceding.
Machærium scleroxylon. All.—For works under water.
Machærium incorruptibile. Mart.—The same as preceding.
Centrolobium robustum. Mart.—For gates and boards. It is easily ignited.

Centrolobium parenese.—For cabinet making.

Myrocarpus frondosus. All.—For interior works.

Myrocarpus fastigiatus. All.—The same as preceding.

Myroxylon peruiferum.—For hubs for wheels and for carriages; an essential oil exhudes from it.

Andira anthelmintica.—For interior work and gates. It is a vermifuge.

Andira vermifuga.—The same as the preceding.

Andira stipulacca.—For the same purposes as the preceding.

Andira spectabilis. Sald.—For works exposed to the air.

Bowdichia virgilioides. Mart.—For keels of vessels, piles and railroad sleepers.

Ferreria spectabilis. All.—For sleepers and building purposes.

Vouacapoua americana. Aubl.—This is the Teak of Brazil, and used for naval constructions.

Apuleia praecox. Mart.—For gates and the large spoons used by confectioners.

Apuleia ferrea. Mart.—For sleepers and piles.

Hymenæa Courbaril. L.—For railroad cars; the bark is used for canoes by Indians; copal resin for varnish.

Peltogyne guarubu. All.—For carriage wheels, beams, etc.

Peltogyne discolor. Vog.—For the same purposes as the preceding.

Cæesalpinea echinata. Lam.—For works under water, sleepers, etc.

Cæsalpinea ferrea. Mart.—For works under water, sleepers etc.

Copaifera bracteata. Lam.—Used as a rope for tying; it is of remarkable elasticity.

Hematoxylon Campechianum.—The Campeche or dye-wood.

Omphalobium Lambertii.—This is excellent for cabinet making purposes.

Schizolobium excelsum.—For fishing canoes.

Melanoxylon brauna. Sch.—For posts and railroad sleepers.

Cassia brasiliana. Law.—For wheels; it lasts on an average, ten years; the fruit is a purge, the tree is tanniferous.

Echyrospermum Balthasarii. All.—For cabinet making, beautiful furniture, etc.

Zollernia mocitayba.—For underground work and railroad sleepers.

Acacia angico. Mart.—For furniture, naval constructions, keels, etc.; it yields the gum Angica, similar to gum Arabic.

Enterolobium lutescens. All.—For building purposes.

Stryphnodendron barbatimao.—The bark is highly astringent.

Acacia Jurema. Mart.—

Order of Myrtaceae.

Couratari legalis.—For boards and boxes.

Couratari estrellensis.—For the same purposes.

Lecythis Pisonis.—For works under water and railroad sleepers; good tow is taken from the corsical layers.

Lecythis lanceolata.—For the same purposes; it also yields good tow, aud the seeds are good to eat.

Lecythis coriacea.—It is but little known.

Lecythis angustifolia.—Is also little known.

Bertholetia excelsa.—A very large tree which bears the celebrated Brazil nuts; the bark makes good tow.

Abbevillea mascalantha.—But little used in building.

Couratari tauari.—The layers of the bark are a very good substitute for papel wrapping for cigarettes.

Order of Laurineae.

Nectandra mollis.—A kind of wood used in all works exposed to the air.

Nectandra amara.—For the same purposes.

Nectandra leucochyrsus.—For boards.

Silvia navalium. All.—For timber for tanneries and boat-builders.

The *Itaubas* of the Amazon (*Acrodiclidium* and *Oreodaphnes*) are not represented; there are, however, numerous specimens of the *Embuias* of Paraná, of the order *Laurineas*, the beauty of which is very exceptional.

ORDER OF APOCYNEAE.

Aspidosperma Gomesianum. D. C.—It is a beautiful wood for rich furniture, and also for decks and knees of Brazilian vessels of war.

Aspidosperma olivaceum. Mul.—Makes excellent handles for tools, is good for furniture, and especially for picture frames.

Hancornia speciosa. Gom.—A bush that yields caoutchouc of good quality.

Hancornia pubescens. Gom.—Of little utility.

ORDER OF SAPOTACEAE.

Mimusops elata. All.—India-rubber is extracted from the trunk of this tree; the wood is excellent railroad sleepers, posts and and naval constructions.

Mimusops balata.—Also yields India-rubber, and the wood is as useful as the preceding.

Chrysophyllum glyciphlæum. Cas.—The bark is sweet; the wood is used for canoe paddles.

Others of the *Lucuma* and *Chrysophyllum* species are also lacteal, but of less importance.

ORDER OF MELICEAE.

Cedrela brasiliensis. Mart.—Called *Acajou* in French, a species of the same order as the *Mahogany* of Jamaica; it is good for doors, windows, fancy boxes and canoes.

Cabralea cangerana. Vil.—Excellent for posts, rafters and sleepers.

Trichilia catigoá. S. H.—Remarkable as a dye and for medicinal purposes.

Carapa guyanensis. Aubl.—Valued on the Amazon principally for its oil, called *Andiroba* oil.

ORDER OF EUPHORBIACEAE.

Siphonia elastica.—This species, as well as others, is remarkable for the caoutchouc that is extracted from the latex, of which more than four million kilogrammes are annually exported.

Jatropha elastiea.—Yields the caoutchouc of *Maniçoba*, already exported from the province of Ceará.

Hieronima alchornioides. All.—A red wood, but little used.

Order of Therebinthaceae.

Astronium urundeuva.—All.—Splendid timber for use under water, for railroad sleepers, &c.

Astronium fraxinifolium. Sch.—Good for fine furniture, pianos and works exposed to the air.

Icica Icicariba. Aubl.—Remarkable for the aromatic and medicinal gum that exhudes from the trunk.

Icica guyanensis. Aubl.—An incense-tree, from the Valley of the Amazon, the aroma of which resembles that of the incense of Asia (*Boswelia.*)

Bursera leptophloeus.—*Emburana*, whose resinous gum has a very agreeable perfume.

Order of Artocarpeae and Moréae.

Brosimum discolor. Vog.—A very heavy wood, of which they make the celebrated walking-canes called *Muirapénima* (bois de lettres,) and also beautiful picture frames.

Brosimum condurú. All.—A wood of rare beauty, for cabinet purpose.

Maclura affinis. Mig.—*Tatajuba* for dyeing; it is a lacteal.

Maclura tinctoria.—With the same properties as the foregoing.

Order of Rubiaceae.

Pinckneya rubescens. Sald.—*Arariba*—A red wood, which makes beautiful boards.

Pinckneya viridiflora. Sald.—Arariba, white, is only used as boards, for ceilings and partitions.

Genipa brasiliensis.—Very much used in Brazil for railroad cars.

Order of Coniferae.

Araucaria brasiliana. Rich.—The Brazilian pine. This is a gigantic tree of the temperate zone, of the provinces of Rio Grande do Sul, Paraná, Santa Catharina, São Paulo and Minas Geraes. It makes splendid boards, masts and spars for vessels, and is good for works exposed to the weather. The *knots* of bases of the limbs are well adapted for joiners' work, of which there are many specimens in the Main Building. The sap is exactly like the turpentine of Europe and the United States. The seeds are much sought as an article of food, and as such are of great value. A National Company was incorporated for the purpose of furnishing to Brazilian and foreign markets the timber of this tree for extensive use.

Order of Bignoneaceae.

Tabebuia leucantha. Gom. A small bush bearing white flowers, whose light, white wood is only fit for Tamancos (wooden slippers) and rough musical instruments for the back woods of Brazil.

Jacaranda procera.—A tall bush, whose leaves are recommended as depuratives.

Técoma sp.—*Ype Tabaco.* The sawdust of which produces the same effect as tobacco, and furnishes a yellowish dye. The layers of the bark are used to wrap cigarettes, and the wood for all the purposes of engineering, posts, railroad sleepers, etc.

Tecoma curialis. All. and Sald.—*Ipê roxo* or pás d'arco (Bowwood). Very good for use under water.

Tecoma chrysantha. D. C.—Has the same application as the preceding.

Order of Proteaceae.

Rhopala brasiliensis. Kunt.—In Brazil, this species and others of the same genus are called *Cutucanhê.* The wood is characterized by the coarseness of the grain and the regularity and number of the medullar rays; it is used for rafters, flooring for bridges, poles, &c.

Rhopala obtusata.—From the vicinity of Rio de Janeiro, and is used for the same purpose as the preceding, and many others of the same family.

Order of Cordiaceae.

Cordia excelsa. D. C.—For boards inside the houses, ceilings, &c. At the age ot eight years the trees are fit for use.

Cordia alliodora.—This is a small tree, but used for the same purpose as the foregoing.

Cordia oncocalyx. All.—The Páo-branco (white wood) of the provinces of Alagoas and Ceará; it is used in building.

Order of Combretaceae.

Terminalia acuminata. All.—Or *Guarajúba*, used for boards and interior work.

Terminalia tingens. All.—*Merendiba*, for dyeing.

Terminalia merendiba. All.—For limited use in building.

Order of Rutaceae.

Quassia sp.—We only know the *Quassia* wood of Paraná, of which drinking glasses are made that impart a bitter taste to the waters drank from them; it is a tonic.

Galipea alba. S. H.—The *Arapoca* of the forests; the wood is little used, although of a beautiful yellow color.

Evodia febrifuga. S. H.—The Wild Orange of the forests; it is little used.

Simaruba officinalis. S. H.—The *Marupa* of medicinal application; the wood is also used for interior work.

Simaruba versicolor. S. H. The common name is *Parahiba* in the province of Alagoas, where it is used for cabinet purposes. The grain is smooth, white, easily cut and polished.

Zantoxylum spinosum. S. H.—*Tinguaciba*, a thorn tree but little valued.

ORDER OF TILIACEAE.

Apeiba Tibourbou. Aubl.—It is the only tree of this order known in Brazil; it is a native of the northern provinces, and is now cultivated in the Botannical Garden of Rio de Janeiro. The *jangadas* or fishing smacks are made of this wood.

ORDER OF MELASTOMACEAE.

Lasianpra papyrus. Pohl.—A tree yielding the paper of Goyaz, on the Serra Dourada; the branches cover themselves by exfoliations of the epidermis, with sheets of paper of a very original appearance. It is a genuine curiosity for any museum, and is of great interest to botanists. To this family belongs the Jacasirão of Rio de Janeiro—*Miconia milleflora.*

ORDER OF ERYTHROXYLEAE.

Erythroxylum utile. Sald.—Or *Arco de Pipa* (sloop-pole), a small tree of very hard wood, good for railroad sleepers and for under-water works.

Erythroxylum (*aureolatum ?*)—*Sobragy*, used for building purposes.

ORDER OF BOMBACEAE. (*Sect. of Malv.*)

Eriodendron samahuma.—The largest tree of the Amazon, the fruit contains a flock of silk, much sought for mattresses.

Bombax munguba. Mart.—The fruit also contains silk; the bark of the trunk furnishes texible material for coarse ropes.

Chorisia speciosa. S. H.—The silk-tree of Rio de Janeiro, represented in the Agricultural Hall by a large quantity of flocks of silk.

Pachira princeps.—A nut-tree of Maranhão, the fruit of which is eatable.

ORDER OF MALPIGHIACEAE.

Byrsonima chrysophylla.—*Mureci* of the sandy soils; its satiny wood is but little valued.

The Mango-trees which grow on the coast of Brazil, in salt water, form a special zone of vegetation, whose types are: the *Rhisophora mangle*, the *Avicennia nitida* (Ratimbó or wood for fences), the *Bucida buceras*, &c., &c.

The numerous species of Palms, which gives so peculiar a character to the vegetation of Brazil, are not extensively represented in the Exposition from our country; only the *Copernicea cerifera* occupies a distinguished place, through the hats and mats, woven of its leaves, and the crude wax, of which candles are manufactured, also extracted from the leaves. Besides this specimen of the vegetable kingdom, some other palms are exhibited on account of the brilliance of their textile matter.

Finally, we will mention the *Bois de rose*, or Brazilian Rosewood, so highly esteemed in Europe, as a species of *Physocalymma florida*, which is also known by the common name of *Sebastiño de Arunda*. We have several specimens at the exposition.

Philadelphia, May 15th, 1876.

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School of Rio de Janeiro.

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